

INTERNATIONAL DRINKING WATER SUPPLY AND SANITATION DECADEAGENDA AND CONSULTATION PROCESS

Venue: 6-8 December, 1982
 Sarvodaya Shramadana Movement
 Damsak Mandira, Moratuwa

<u>DATE</u>	<u>TIME</u>	<u>ACTIVITIES</u>
Monday, 6 December -	9.00 a.m.	Inaugural Session (Lighting of oil lamp) 1. Welcome Address - Mr. Y.Y. Kim Resident Representative, U.N.D.P. 2. Keynote Address: The Role of NGOs - Dr. Wickrema Weerasooriya Secretary, Ministry of Plan Implementation 3. Address: NGOs and the National Decade Plan Mr. Harold Fernando Senior Assistant Secretary Ministry of Local Government
	10.30 a.m.	TEA BREAK
	10.45 a.m.	Plenary Session: Objectives and Process of Consultation Working Groups in Defining Action Strategies - briefing by Organisers Vijitha Fernando and Jake Pfohl
	11.00 a.m.	WORKING GROUP SESSIONS <u>Theme: Water supply and sanitation in relation to community involvement at all programme stages</u> <u>Case Study A: A Sanitary Revolution - Water and sanitation as they relate to needs assess- ment; and as an entry point to programmes and an adjunct to other sectoral actions.</u> Presentation: Vijitha Fernando Resource Person: Dr. Hiranthi Wijemanne <u>Case Study B: Drinking Water for Goonambil - Selection of field workers; effective training approaches; necessary community organisation.</u> Presentation: Vijitha Fernando Resource Person: Sisira Navaratne Padmini Abeywardena Videotape (Film Show) <u>Case Study C: An Experiment in Participatory Educational Materials Development - Learning Materials and Methods for health, environment, and other social/economic sectors.</u>

Dissanayake

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*M. Kandiah
 S. Ganesan*

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ACTIVITIES

Monday, 6 December - 12.15 p.m.

Working Group Formation and Task Assignment

12.30 p.m.

LUNCH BREAK

2.00 p.m.

Working Group Sessions:

- Clarifying Case Study Elements
- Outlining Key Approaches for Topic
- Defining Action Strategies for Implementing Approaches

5.00 p.m.

Plenary: First sounding of working groups

Tuesday, 7 December 9.00 a.m.

Working Group Sessions:

- Finalising Action Strategies for the Topic
- Defining Next Immediate Steps to be taken

10.30 a.m.

TEA BREAK

10.45 a.m.

Working groups continue

12.00 noon

Plenary: Reports of Working Groups

12.30 p.m.

LUNCH BREAK

2.00 p.m.

Plenary Theme: Low-Cost Technology Adaptations in relation to social needs and economic initiatives

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side)*

Case Study D: Small Tanks - Improvement of traditional water systems in rural areas.

Presentation: Vijitha Fernando
Resource Person: George Mendis

Case Study E: Lavatory Without Walls - Technology adaptation to meet special social needs.

Presentation: Vijitha Fernando
Resource Person: S. Ranugge

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Case Study F: Feasible Technologies - A range of technologies appropriate for NGO extension.

Presentation: Mr. Karunadasa

5.00 p.m.

Plenary: Reports of Working Groups
Report of Consultation Synthesis Group

<u>DATE</u>	<u>TIME</u>	<u>ACTIVITIES</u>
Wednesday, 8 December -	9.00 a.m.	<u>Plenary:</u> Presentation and Review of Draft Strategies and Recommendations
	11.00 a.m.	TEA BREAK
	11.15 a.m.	Final Preparation of Consultation Draft Report for closing discussion.
	12.30 p.m.	LUNCH BREAK
	2.00 p.m.	<u>Round Table:</u> - Presentation of Consultation Draft Report - Round table discussion of recommended strategies and next steps with Government, UN system, Bi-Lateral, NGO representatives. Chairperson: Mr. Bradmon Weerakon Vote of Thanks: Mr. Rafiquzzaman, UNV/UNDP.

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SUMMARY OF DECADE OBJECTIVES FOR SRI LANKA.

The basic purposes of the Plan are (1) to mobilize public opinion, generate interest, and promote discussion leading to higher levels of community participation; (2) to provide to the national government and international donors guidelines for resource allocation; and (3) to make recommendations consistent with the overall development objectives of the government.

Sri Lanka, with one of the highest Physical Quality of Life Indices, presents a better health picture than many other Asian countries. Nevertheless, bowel disease is today one of the highest causes of death. One important aspect of the Decade Plan is increasing the quality and quantity of health education.

In water supply, the national goal is to improve conditions in quality, quantity, reliability and accessibility. In sanitation, the government will introduce vast improvements in urban and rural sanitation. Piped sewerage will be limited to a few cities. Efforts to improve excreta disposal will be coordinated with efforts to improve water supply. The emphasis will be on improved pit and water seal latrines, and the entire effort will be strengthened through increased health education and community participation.

Coverage Program Objectives. The government plans to provide all of the urban population in the country with safe and reasonable quantities of piped water by 1990. It is recognized, however, that all urban systems may not be completed until the mid-90s. Although the government will attempt to provide 100 percent of water needs in the rural sector by 1990, the Plan provides for 50 percent coverage of the rural population by 1990 and 100 percent by 1995. The emphasis in the short term will be on the conversion by 1984 of all bucket latrines in the country to either water seal or pit latrines, preferably the former, whenever and wherever water supplies are available and sufficient. Sanitary excreta disposal in the rural sector will be improved by increasing the number of water seal and pit latrines, construction of which will be encouraged by government-provided incentives.

Support Program Objectives. Six support programs have been identified. These are :

1. Human Resources Development. Entry-level, mid-career, and advanced-level training will be provided.
2. Appropriate Technology. Those industries that use national manufacturing and local operations and maintenance capabilities will be given preference.
3. Health Education. Preventive health care will be improved by realigning both human and financial resources.
4. Community Participation. Community organization to identify and solve water and sanitation problems and to promote self reliance will be encouraged in ways which strengthen the community development process.
5. Institutional Change. Existing institutions will be strengthened and other change introduced to achieve national goals.
6. Financial and Investment Priorities. Revenue collections will be increased; water tariffs will be instituted; low-income consumers of water will be subsidized.

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NATIONAL NGO CONSULTATION

INTERNATIONAL DRINKING WATER SUPPLY AND SANITATION DECADE

An overview of the Case Studies

Six case studies have been developed to help serve as points of departure for strategy development in the working group sessions. These case studies are divided into two basic themes:

1. Water Supply and Sanitation in relation to community involvement at all programme stages.
2. Low-cost technology adaptations in relation to social needs and economic initiatives.

Theme 1.

The first three case studies refer to different aspects of community involvement in water/sanitation and related activities. Each case study has a different emphasis, highlighting an important sub-issue of the theme.

Case A

Case Study A: A Sanitary Revolution focusses on the issue of water/sanitation as a basic human need, and depicts how in one urban context an NGO discovered that it became an even more essential entry point than the expected entry point of income generation. This subissue could be stated as: What approaches are necessary for integrating water and sanitation into NGO and village-based needs assessment and programming? Also, despite the valid social aims of the NGO mentioned serving this community: how can such intended efforts help people to be creatively linked to complementary resources which are probably outside the range or capability of many NGOs?

Entry Point

Case B

Case Study B. Drinking Water for Gunambil, also relates to the same theme of community participation, but considers a range of subissues which can serve as a starting point for another working group. This sterling example of community involvement at all stages of a water-supply project defines needs and approaches in a number of areas. Selection of field workers, effective training approaches, necessary community organization, voluntary labour, linkage to the health sector activities, maintenance of systems, etc. are some of the needs/approaches raised here. Using this case study as a

starting point, many aspects of community involvement could be considered- including the issues of community contribution, economic by-products in terms of new employment for workers in this sector and a balance of other environmentally related factors to water/sanitation and their relation to community based programming. Overall, larger needs are also suggested- e.g. how can such wholistic approaches and community based approaches to water/sanitation be more effectively linked to the activities of governmental, external assistance, and other non-governmental agencies?

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Case Study C. An experiment in Participatory materials development goes into depth about another specific dimension of community participation- the communication and educational process and materials by which the involvement of the community especially those traditionally left out of the process can be evoked. This case study is based upon the experimental work of a Marga Institute specialist in the field area of an operational NGO based in an urban area. It focusses on some approaches for fostering a dialogical process with the community or in this case a specific womens' group. Some of the approaches outlined here are the development of materials with the full creative involvement of the person; use of materials for investigation, analysis and other tasks and planning skills (besides the purely didactic or instructional use of them); learning processes as an effective bridge to community action with the fullest possible participation; revision of the facilitation style and role of the field-worker and the participant. People-centered educational approaches and techniques as a whole may enhance the already existing objectives and aims of Sri-Lankan NGOs. How could such methods and materials be further developed and built into programs to augment their village awakening efforts?

Each of these three case studies thus represents different important aspects of community participation- though they are all related. They have been structured in such a way so as to facilitate the work of three different working groups.

Theme 2.

The second major theme of the Consultation is Low-Cost Technology applications in relation to social needs and economic initiatives.

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Case Study D. Small Tanks is a study of a programme which suggests a number of interesting approaches to overall water management. Though the emphasis is not on drinking water- the revitalization of an ancient system to meet a new technological need raises some interesting approaches. Among them include advantages in linking new technologies to traditional systems; linkage of drinking water/sanitation to overall water use programmes; building upon time-tested and ecologically proven systems of water management of a former social order and defining new social means to restore or build a new process of control over environment.

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Case Study E. Lavatory without Walls. focusses on another technological need; the development of technologies to meet specific social concerns. This "latrine" innovation of an NGO depicts how the question of an appropriate technology for rural schoolchildren was developed and all of its social advantages. It is a "client-centered" technology that meets childrens' specific needs. The social engineering aspects of this latrine are quite considerable- the device raises the issue of how technology can meet social needs and how such developments can be extended? What kinds of information services, for example, are needed to extend such a novel idea?

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Case Study F. A Range of Technologies feasible for NGO extension illustrates different low-cost technology models to meet a range of water/sanitation needs. These were prepared by a government resource person. Models are simple, can be done without scarce experts or spare parts, and help the community control a number of different water sources in the community as well as offer options for sanitation.

Conclusion

There are certainly many more needs and approaches that can be drawn from all of these case studies. In this overview, we have sought to point out how different aspects of a theme are depicted by the case studies and how different but related needs/approaches emerge upon consideration of each of them. They serve as different starting points for development of strategies.

As a whole, these case studies tend to point to the need for creative and optimum use of complementary and collaborative approaches for development agencies than to actual sample mechanisms for large scale joint involvement of Government/UN/ Bilateral and NGO development organizations. Yet they do point out specific areas where different groups have been involved in different ways- and in some cases where collaborative efforts have already shown impact. The case studies project different points where collaborative efforts could have the effect of intensifying community level results- whatever the strengths and constraints of various organizations concerned. The consultation will hopefully use these points of reference to develop strategies by which strengths can be optimized- and constraints of different agencies reduced- from village level NGOs to Government/UN system agency and Donor Agency. The result should be greater community-based action.

Study A
Case History No. 3

Co-operating with Non-Governmental Groups :Needed:a sanitary
revolution.

To guarantee safe water and adequate sanitation is in a very deep sense a pledge of care and concern for ordinary people and their well-being. It can become a test of the honesty, decency and true modernity of any government if it puts sanitation and clean water at the very head of its national programme... Barbara ward

Access to safe water and sanitation is a basic human right recognized in every society today. In the developing countries this access can change the whole aspect of health and living conditions.

In the burgeoning cities of these countries the situation regarding water and sanitation is getting poorer and poorer. One can be poor in many ways - in food, money and in employment. To be poor in water supply and unhealthy surroundings means misery, apathy and disease.

Water is perhaps the most basic need. Once in a sparsely populated world, the streams and ponds could purify themselves. Or there were tried and tested techniques - techniques of picking the coolest river for drinking water, or digging a hole alongside the bank so the water filtered through earth, ensured against gross contamination.

These are only dreams, dreams in today's world which has grown by a thousand million people in the last twenty years. And, today to the ancient pollutants of human and animal faeces are added the twentieth century variety of chemical effluents from factories and worksites.

The consequences are appalling in terms of human suffering. Recent studies have shown that one in every four babies born alive dies before its first birthday with diarrhoea as the leading cause and much of it is attributed to water and poor sanitation.

Only a fundamental shift in objectives and methods both by governments and people can change this situation in the coming years. When safe water is considered a basic right as part of a healthy existence and not as a utility or a convenience, and when human wastes are regarded as a resource to be managed in a way that guards human health, only then will it be possible to make improvements.

Where does one start? This is the question that baffled the handful of women ^{who} belong to the Colombo YWCA when they went in to Hattaya Watthu (Garden No. 68) in the heart of the business area of Borella, a stone's throw from the city's largest children's hospital and situated among vendors selling fruit, vegetables and cooked food by the roadside.

The YWCA's Borella branch were interested in getting the women of this Garden into a group to be trained in sewing or simple hygiene. What they uncovered was a festering sore of neglect, a cluster of nearly five hundred people living in the stench of their own excrement, served by one tap, 2 washrooms and 2 lavatories.

The Garden is no garden as we know it. A passageway through shanties of a variety of sizes and shapes and built of wood, brick, old packing cases, zinc sheets and covered with plastic, leads to a stagnant pool. The water deposited here by nature in the form of rain and by the inhabitants through their household ablutions, does not know where to flow.

It's always there, when there is no rain at all it takes a month for it to dry up completely, says twenty three year old Athula who has lived all his life in the Garden.

As a boy he played in the filth. Today, he is a clean good looking lad and realises the dangers of the stagnation. But he shrugs his shoulders and turns his back on the problem.

Not so Mr. E. G. Simeon who has spent twenty years of his retirement in the Garden. He lives in one of the two big houses (the other is occupied by the landlord who makes a fortune renting the shanties to the poor) and he is concerned about the people who live there. His wife, a gracious old lady nods her agreement. This couple form the liaison between the people of the Garden and the YWCA. It is in their hospitable verandah that I met Athula and other men and women on my many visits to the Garden.

We have formed a society and we meet regularly. Members of the Common Amenities Board come and talk to us but now I am beginning to think it is all talk, talk..... sighs Mr. Simeon. He is old and he despairs that the young will not take an interest in improving the Garden.

The tap dripped a few drops of water and tured into a trickle as we walked past. The teenager ^{who was there} to get a bath turned and smiled cheerfully at the camera. Behind her were the two washrooms and one bathroom. Close by, a pile of rubble.

That's the second bathroom. Mrs. Simeon pointed out. It collapsed soon after it was built. The contractor hadn't strengthened the foundation on that soggy ground..... the Common Amenities Board people came and rebuilt it on the other side.

The mess behind the washrooms has ^{to be} seen to be believed. Effluents from the two lavatories flow ~~lavatories~~ flow along the land, heaped with household garbage. Mosquitoes swarm over it and the stench begs description. Mrs. Simeon is ashamed to take her visitors to see this sight. But she must.

'Otherwise you will not know what surroundings we live in' she tells me. Every month someone has to go to the municipality to get a labourer to bring the 'Kunu Lorry' (garbage van) to clear the dump. Each household pays a small sum and driver and the cleaner have to be satisfied to come again. But each month it is the same story. Overnight the dump fills, the excrement flows into and the mess is the same.

The vegetable vendors from the street dump their garbage there too and people from across the street steal in at night and add their rubbish. The mound grows as you watch and another problems builds again.

Inside the shanty town things are much worse. There is a broken down lavatory here and a tap that has stopped functioning a long time ago.

But the people on this side still use the broken lavatory and living here is a brave effort for everyone. What can they do when there are no lavatories. they ask?

The taps sometimes give a little water during the day but never a sufficient flow. After 10 p.m. there is some water and there is a scramble to collect and store it. Hard by each shanty is a bin made of zinc, filled with water - for every household use including mixing the infant's formula.

The people of this garden work in the children's hospital close by as orderlies or clerks, Some work in the railway, as firemen or as lab attendants at the medical Faculty close by. There are three postal workers. The women do casual domestic work when it is available in houses close by. One side of the garden looks brighter cleaner and adorned with a few pot plants. Mrs. Simeon, Athula and others talk contemptuously of the other side where there is total neglect.

They can live better....some of the boys earn well. But they don't care says Mrs. Simeon.

Her husband thinks otherwise. He blames the owners of the shanties who are interested only in collecting the rent. They do not attend to any maintenance. Even the ^{MP} never comes once he has lost their votes.

Some blame the people for the appalling conditions Others blame the MP and the owners. But there seems to be no solution that the YWCA or any ^{one} can think of.

The problems get worse each year. Children sprawl everywhere and some families have as many as twelve children. Family Planning workers have never been there, nor have health wardens.

Little children like Ameena who walked with us will, if things are not improved spend her whole childhood in this unhealthy environment next to the garbage dump, in her home without water. Using the lavatory that is a constant filthy mess and playing by that pool of stagnant water is the best breeding ground for microbes and parasitic worms.

The WHO says that 90 percent of child deaths could be prevented by better water systems, environmental sanitation and sewage disposal. No one has done a survey at Hatahaya Wattha but it is unrealistic even to think that proper sanitation facilities and piped water will reach them in the foreseeable future. Other larger cities with urban migration bursting their shanty towns at the seams have tried alternative systems and they have worked well. Tokyo has long used tank carts to collect human waste for use as fertilizer. Composting units within the household are being tried in Tanzania, aimed at providing a safe disposal for human and animal waste which produces an odourless fertilizer as an end product. Methane gas generated from human waste is being led to a gas ring for cooking in India.

All these experiments may be tried in our shanty towns. But what of water? Four hundred people in this Garden have four taps - with only one in working order. As a rule there is no water during the day. The trickle begins at night and continues for a few hours. One cannot even begin to ask why they do not use proper sanitary methods when they use the ~~lavatory~~ lavatory.

In Colombo there are 13,839 slum units, 16,000 shanty towns. They all have problems with water and sanitation. These large numbers spell daily misery and disease to a considerable segment of the city's population today. With urbanization and the rapid growth of cities the problems of shanty towns like Hatahaya Wattha become urgent and tragic as ~~never~~ never before.

Study B
Case History No: 4.

Co-operating with Non-Governmental Groups : Drinking Water for Gunambil Community participation is a comparatively new strategy which promises to bring basic services to increasingly large numbers of people. It involves all the people in an entire community to work together to improve their own lives. Communal activity has long been carried on in scattered villages and cities of the developing world. What is new today is a world-wide understanding of the local initiative and a world wide effort to bring this basic approach to all villages and slums and shanty towns especially those not yet reached by regular government services and to back up this service with state-wide and nation-wide support.

The challenge today and through the rest of the decade is to develop communications systems appropriate to the needs of the vast majority of the people, those who are the 'community participants'. But these systems must not presuppose a passive audience who will eventually do something if they are told often enough and long enough. To promote genuine community participation a different approach is required, based essentially on dialogue rather than on preaching.

The story of Sarvodaya at Gunambil is a story of community participation at its best. Here it is:

Fifteen miles east of the hill capital of Kandy lies Gunambil. It was once a tea estate. Today it is a colony of one hundred and eleven families, six hundred and twenty five people. Gunambil is 600 ^{metres} ~~miles~~ above sea level. Below it spreads the flourishing tea estates of the hill country. On every side is lush green, a certain testimony to abundant water. But the real story is ironically different. There is water, but not safe water for drinking for the people who live there or in the neighbourhood.

Sarvodaya, in the process of its village reawakening programme, started work at Gunambil three years back. A pre-school with 30 children a farm of 28 acres and fifteen young people working in a community shop were the beginnings of a story which led to Gunambil getting safe drinking water from the lush springs on the hills surrounding the village. The little water that was available for the people of Gunambil, Undugoda and the neighbouring villages was not safe for drinking. In common with many parts of the island, the water was not sufficient during parts of the year. Only about 12 percent of the total

population of Sri Lanka have access to safe drinking water. In rural areas 90 percent obtain their daily requirements of water from shallow wells or surface sources. These wells and sources are not protected sanitarilly - hence the quality of water is questionable. There is also the problem of water drying up during the dry season, especially in the dry zone of the country. Hence the consequences of this takes its toll of the people - today 40 percent of hospital beds are occupied by patients suffering from water-related bowel diseases and periodic outbreaks of cholera. A large number of people suffer disabilities through weakening by parasites in the intestines such as amoeba.

Sarvodaya began receiving requests from the people of these villages for water right from the start. But most villagers merely want more water and water closer at hand. Also, once they hand over the request to Sarvodaya, they expect the problem to be solved without their bearing any part of the responsibility.

Using the Sarvodaya strategy, meetings were held with villagers to ascertain first, the actual need and second, the need to create an awareness among the people of the relation between good health and safe drinking water.

Accordingly, a health service in the village was re-inforced with charts depicting the relationship between water related diseases and polluted water. There was also the need to emphasise water washed diseases (leprosy etc.). Accessibility had to be combined with adequate safe use and simple hygiene. Later a video film was added to stress the importance of safe water for drinking.

Frequent family gatherings were held as the beginning of the project. Project committees evolved out of these meetings, with Sarvodaya providing assistance and advice. The project committee then becomes the organiser and the decision maker, always in consultation with the rest of the villagers.

At this stage the Sarvodaya Rural Technical Service steps in. The project is designed by the SRTS in consultation with the people at more gatherings. The project is then approved by the village and by Sarvodaya and from then on the work and the responsibility are shared and the project programme including the financing are planned and agreed on.

The Swiss engineering firm of Helvetas supplemented the technical work on the project. A survey was carried out together with SRTS to identify reliable sources of water in the region. Water measurements of the source on the hills surrounding Gunambil were taken over a year and found to be feasible. The sources that were identified do not change their yield immediately after heavy rains. This indicates that

the water passes over a long distance under ground and any contamination is filtered out. Chemical and bacteriological tests were satisfactory. Tests also showed a certain sensitivity towards cement. It was decided that all pipelines should be made of plastic (PVC) in the SRFS workshop at Polgolla and that the cement tanks should be coated with three coats of bituminous paint.

With Helvetas resident engineers providing the expertise and SRFS the technical backing, the people began the construction work, with preliminary excavations of the catchment, and collecting all locally available material for the work. As work progressed, groups of experienced Sarvodaya workers joined the villagers and worked with them.

Construction of simple but long lasting and easily maintained structures are the key to this project. The people have the final responsibility of maintaining the water systems. Government Institutions are involved in periodic checking with bacteriological tests to see that the hygienic requirements are met.

In Gunambil water sources are situated above the village. These are tapped underground and piped to storage tanks from where the water is distributed to the villagers from public standpoints. At every stage care is taken to avoid any contamination of this safe ground water by establishing the intake area as a protection zone and trees being planted above the rising point. The storage tank is well sealed and the pipes are laid three feet underground.

The skill of the local craftsman, mason and labourer is used throughout the construction. All buildings are in stone masonry to save expensive reinforcement. The spans of the arches are unified, so that the same framework can be used at various places. High quality of workmanship is maintained with close supervision and every effort is made to avoid waste of material, and manpower and achieve a lasting scheme. The system of supply decided on depends on local circumstances. Wells are still popular and have the advantage of less cost as there is no additional distribution system. But compared to wells the gravity system from safe underground sources such as the Gunambil system the water is not exposed to contamination by pit latrines, unprotected old wells, surface run-off etc.

Also,

There is no need for handpumps - those are mechanical devices which need maintenance and carry the risk of breakdowns.

In the hill country, in many cases, the ground-water table is far beyond the village.

No control can be maintained on wells in valleys among paddy fields where agro-chemicals are used.

Requirements of health related factors in water can be met much easier by piped systems.

All these were found to be positive factors that decided on the use of gravity water for drinking for Gunambil as against a system of wells.

Sarvodaya workers masons and technicians and other skilled workers from the village are trained on the job. Four weeks of these classes for mason trainees are conducted annually. Week end seminars for supervisors are organised at weekends. These classes always surface other basic needs of the village and these too are included in the classes. Building a copost pit and compost applications in home gardens and other simple technologies are all discussed for the benefit of the village.

Sarvodaya workers meet with the village workers to review the work, assess the approach and share experiences. Costakers of village water supplies and handpumps are trained during project realisation as well as at the periodic training programs.

Special problems also involve the co-operation of the villagers. For instance, an alarming reduction of yield of a water source calls for the afforestation of the area. There has to be a reduction in the consumption of fuel wood by the devising of a more ingenious and efficient stove. Erosion of top soil calls for methods of simple soil conservation. The villagers are poor. So there is a need for additional sources of income with the provision of small scale industries, weaving centres and improvement in the methods of agriculture.

The gravity water system itself is maintained by the villagers. The water is collected from five underground sources in the hills above the village. Each catchment consists of a drainage channel, covered with concrete, a dam and of a supply and overflow pipe. All the water is collected in a collection chamber. This chamber is so constructed that it also serves as an inspection chamber as well as a sedimentation basin. The water is retained in this chamber for about fifteen minutes to settle out the sand which may be found in source water and could cause interruptions in the piping system. The trees to protect the water sources and prevent them from running dry.

The storage tank stores water during time of low or no consumption to make it available for peak demand. The pipes into the tank supply the steady flow from the source while the pipes from the tank to the village have to transport water during times of peak demand. So the storage tank has to be situated as near as possible to the water users. According to the topographical situation at Gunambil the

storage tank is situated at the top of a hill above the village. The storage volume covers approximately 40 percent of the daily consumption. (4450 gallons).

The distribution is done with PVC (plastic) piping. This is the most suitable material for the water composition of Gunambil. Public taps are installed at every 100 - 200 meters. There are no house installations. The location of taps depends on the concentration of population and technical requirements such as drainage of low points and ventilation of high points.

Wells continue to be used for bathing and drinking. This serves to conserve the drinking water and helps to continue the cultural pattern of the villager-where the well is a gathering place for socialising.

It is now proved that, after nearly two years of use, maintenance is simple and running costs are low. A native of Gunambil has received training to be the caretaker after a special course for caretakers organised by SRTS. He works about two days a month-checking the entire system including the protection zone of the intake area, cleaning the collection chamber and storage tank twice a year inspecting the standpipes and taking on the minor repairs. Carelessness of handling the taps has to be paid by the consumers directly concerned.

No losses of taps or other material has been noticed during the whole period that this system has functioned. For this Sarvodaya holds responsible the fine spirit of community participation they have built up. The improvement in the health of the people, especially the children bear testimony to the benefits of the health 'classes' which a trained health worker conducts at village gatherings. The relationship between good health and safe water is stressed at these. The villagers have realised their responsibility to maintain a safe water supply and they respect this at all times. Even the young and strong had felt the strain of carrying water over great distances earlier. Twenty six year old Podi Mahattaya considers the new system a great asset (Loku pinak, he said). 'Now we can save our energy for more productive work', he said. Perhaps that is what the young felt mostly - that fetching water was a great thief of precious time.

But the realisation that safe water means good health is dawning. There are other indirect benefits too. A young Sarvodaya worker told me that earlier there were three factions in Gunambil. Now they are united - through the water system. Getting together to work for the water system and co-operating in maintaining it has fostered close relationships between the people.

School records at Gunambil showed a steady rise in attendance attributed to better health - less cases of water related illnesses - among the school children.

Villagers are also aware now of the adverse effects of deforestation. Farmers particularly were quite articulate about their fears of less water in the future if trees were cut down and no afforestation was done.

'Rain water did not run off so quickly when there were more trees', one of them said, 'there was no problem of periodic water shortages then'.

A farmer from Undugoda said that ten years ago his mother fetched water only during one or two months in the year. Now she has to go daily four or five times sometimes nearly every month'.

'We got water for our paddy fields from Uda-Idan-Ella. Now there is no water and we have to go two or three times to see whether the fields have enough water, a 55 year old farmer remarked.

With development the trees vanished and houses came up. Fountains and smaller water sources have dried out. The villagers have an almost uncanny understanding of the need for trees- if they are to have enough life-giving water.

'Protection' has an added meaning here. It means that the protected area where the springs issue forth water must be kept free from human and animal defiling.

In every one of its aspects the key to the success of this project has been the realisation that it is essential to go to the people themselves and encourage whole communities to make their own decisions to better their own lives. The necessary local human resources are there and once they have perceived their own needs and wants NGOs or other agencies can step in and provide the necessary training and back-up services, as Sarvodaya has done. This approach helps build an efficient and permanent corps of qualified local workers able to provide basic health, nutrition, sanitation and other social welfare services - as Sarvodaya has done with safe water for Gunambil.

Case Study C

Report on the Development of non-formal
Education Materials

1. Introduction

The UNDP/CDS support project for South Asia has planned a workshop for the Sri Lankan NGO participation as part of the IWSSD programme in Sri Lanka. The development of non-formal education materials (strategy D) is one of the components of this workshop. The CDS Consultant, Mr. Jake Pihol who visited Sri Lanka, to work out the preliminaries of this workshop, perceived the necessity of developing non-formal education materials through a particular process of involving a community. A series of discussions were held with Mr Pihol to work out the details and clarify the underlying concepts of this task. On the basis of these discussions a strategy component developed by Mr. Pihol was accepted as a guideline.

Based on the strategy component D and the materials to be developed the following objectives were formulated.

2. Objectives

1. To develop non-formal educational materials, for analysis by NGOs at the consultation meeting.
2. To evolve a process to enable the development and presentation of non-formal educational materials to the NGOs.

3. The Task

3.1 Development of NFE Materials as per supplement strategy Component D.

3.1.1 Diagnostic Materials

- 3.1.1.1 One set of flexiflans.
- 3.1.1.2 One set unserialised posters depicting incidents or facts of life of the community.
- 3.1.1.3 Water use practice chart.

3.1.2 Analytical Materials

- 3.1.2.1 An open ended poster/drama presenting a story for discussion.
- 3.1.2.2 A Resource synthesis game.

3.1.3 Planning Materials

- 3.1.3.1 Visual planning materials - water supply, sanitation improvement.

3.1.4.6

3.1.4 Didactic Materials

3.1.4.1 One learning game on water/sanitation and health/hygiene

3.1.4.2 A comics series with information woven into the story, based on a real village experience and related to water/sanitation/health.

3.2 Evolving a suitable process for the development of NFE materials as per 3.1 (see above).

4. Selection of Community

4.1 Identification

4.1.1 The consultant indicated the usefulness of a community where an NGO is already involved in water and sanitation programme.

4.1.2 The U.S. Save the Children Federation was identified as an NGO involved in W/S programmes.

4.1.3 With the concurrence of the Consultant and the Director of US Save Children Federation, Dr. Mrs. Marina Fernando.

The Kirillepone, Canal Bank, Shanty Development Project was selected.

4.2 Initial Phase

4.2.1 Discussions were held with the Director USSCF to acquaint ourselves with their project and learn about their programmes and the community at Kirillapone.

4.2.2 With the Director USSCF an initial visit to the community was made, and the two facilitators introduced to the community leaders involved with their project.

5. The strategy

5.1 Study of the community.

5.1.1 The initial visit with the Director US Save Children Federation facilitated in establishing rapport with the Community Development Workers, Health Workers and others interested in the project work. The discussions with the C.D. worker and others revealed some of the information necessary to serve as a basis to initiate our plan of work and explore further for the selection of the group.

5.1.2 The Kirillapone Shanty Community has identified themselves to belong to six distinct groups on the basis of their previous residences before re-settlement at Kirillapone. Though they had conflicts in their social relations at the early stage of settlement, these have gradually withered away along with time.

5.1.3.....4

5.1.3 There are 36 households with a population of about 325 persons. Most of them are labourers while some are employed by the U.S. Save Children Federation Scheme in house construction and other related work. The majority are Sinhalese while there are Tamils and Muslims living peacefully and also participating in community development activities without any conflict. The houses are mostly dilapidated (except those constructed under the aided scheme) ill-ventilated with a total floor area of about 120 to 200 sq. ft., and almost all are unfit for human habitation as cooking, dining, sleeping etc., take place in this little space.

5.1.4 Water supply is from nine stand pipes provided by the Municipal Administration, while 2 blocks of public latrines are available for their use. Disposal of refuse is through two collecting receptacles. The usual complaint was that these receptacles are not cleared at frequent intervals.

5.1.5 The sketch map annexed shows the Geographical details of the community. Visits to those six different units and discussions with the mothers and house elicited a wealth of information both for the selection of a group and their behaviour towards water and sanitation.

6. Selection of the Groups

6.1 The initial visits to these six groups indicated the necessity of identifying mothers who are willing to come forward and discuss their problems (not necessarily health). During house visits it was found that most of the mothers did not wish to present themselves and discuss things pertaining to their life. This was because they were not used to this type of discussions with educated persons.

6.2 In addition to individual house visits arrangements were made to have informal group sessions in their own shanties. It was found during these meetings that some mothers did not contribute anything in their own groupings. This position made us to select a few mothers who were willing to discuss freely from each block of shanties.

7. Selection of the final group

The following criteria were observed in selecting the final group.

- 7.1 Availability of members during day time.
- 7.2 Free time to spend with the group.
- 7.3 Willingness to come forward and discuss.
- 7.4 Representatives from each block of shanties.
- 7.5 Ethnicity - Sinhalese, Tamil and Muslim.
- 7.6 Previous participation in shanty development work.
- 7.7 Some understanding of their shanty life and voluntary services.

8. Final Selection of the group

A meeting was arranged with about 5 to 6 members from each block of shanties, at the Community Hall. The requirement to have a group for subsequent discussions was explained considering the above criteria and giving more weight to those who are voluntarily prepared to participate in the final group of mothers for the task to be selected.

9. Involvement of the Artist

The Artist who was identified was involved in discussions at the meeting held at the Community Hall. He was taken round the shanties to show the life processes of shanty dwellers. He was further involved in discussions with the final group. The idea of involvement was to make him understand the real life of people so that he would be able to produce materials almost relevant to identical situations.

10. Working with the Group

10.1 Two meetings were devoted to establish and promote rapport and create the necessary social environment with free, open discussions. This has facilitated to study in depth their socio-economic environment, water supplies and environmental sanitation.

10.2 How the community feels about their problems was also elicited at these meetings. The basis necessary for us to develop the strategy in developing materials through a dialogical process was also demarcated. The Artist who was also involved perceived the situations and problems in their very nature of existence.

The subsequent meetings were gradually converted to discuss their own felt needs of water and sanitation.

11. Evolving the process

11.1 Except for the initial visit with the U.S. Save Children Federation and the exploratory visits with the Community Development Workers to the community the process was evolved as the work progressed in subsequent endeavours.

11.2 The above visits emphasized the need for further exploration of life styles of people and this has led to the organisation of further exploratory visits to their huts for informal group work.

11.3 The above section 11.2 elicited the socio-economic and cultural background of the shanty community and their reactive behaviour for programmes implemented in this population.

11.4 The analysis of situation 11.3 suggested the necessity of selection of a few from each block so that a selected group would facilitate more for broader and meaningful analysis of the situation for the development of the materials. So, when discussions were in progress names of persons who contributed effectively were noted for subsequent interventions. This step was taken to ensure meaningful participation in the development of materials with them.

11.5 Once the initial interventions by way of informal group sessions where discussions were based on the felt needs, were over, arrangements were made to have a general session with those who participated at the initial phases at the Community Hall.

12. Group Discussions in Relation to the Task indicated in strategy component

During the initial meetings of the final group, the objectives of our interventions, being the facilitation given to the community to diagnose, their own community felt needs and problems, analyse them and suggest solutions in the light of the discussions as a learning process, were launched.

12.1 Diagnosis

The diagnostic situations which we had perceived during our exploratory and informal visits were suggested to provoke discussion of particular situations in detail. The nature of the diagnostic situation did not differ from section to section of the community since there appeared to be a significant degree of consistency. Therefore the consensus of the group was facilitated and this was utilised to develop provisional diagnostic materials which with subsequent discussion and modifications led to the final diagnostic materials. The materials were realistically depicted as the Artist himself participated in the discussions.

12.2 Analysis

Stimulation of Group thinking was made in the light of diagnostic situations and their own life experiences. This had facilitated the group to come out with their own experiences with regard to water, sanitation and other health and social hazards. One of the cases for example, was that of a child who was made to swallow a wrist watch strap by his older brother. This incident was analysed step by step up to the point of the child's recovery. Another situation where a few families were infected with diarrhoea is highlighted in the form of an open ended story for discussion at this consultation meeting.

This analytical process was further facilitated by our intervention wherein classifications were made in respect of the causative factors relating to worm infestation, diarrhoeal diseases and social and health hazards. This casual relationship was illustrated by their own analysis of the situation. The aim of these interventions was to stimulate group thinking with regard to analysis and planning.

12.3 Planning

The group was stimulated to concentrate on the available resources and practicability of solutions to suit their own physical and socio-economic environment. The group processes were geared to a critical appraisal of the pros and cons of the various solutions.

The planning.....

The planning process was facilitated by the experience the people had in relation to the upgrading efforts made by the U.S. Save the Children Federation.

The planning materials submitted is an outcome of these group efforts.

12.4 Information/Didactic

Didactic materials were developed in association with the group thinking regarding areas stated above in the diagnostic, analytical and planning processes. The technical expertise of the facilitators was also influential to some extent in designing these materials.

13. Development of Materials

Diagnostic Materials - Set of Posters

- 13.1 A situation where garbage is disposed into the storm water drain causing nuisances.
- 13.2 Refuse being taken to the collecting centre which is itself a nuisance.
- 13.3 Collecting worms from the Kirillapone Canal for sale by children.
- 13.4 Canal being blocked and causing nuisances eg. mosquitoes, bad odours.
- 13.5 Storage of water exposed to the risk of contamination.
- 13.6 Washing pots and pans - causing pollution at stand pipe.
- 13.7 Quarrel at a standpipe.
- 13.8 Soil pollution by toddlers.
- 13.9 Pig latrine - a nuisance.
- 13.10 Smoke nuisance - a physical hazard.
- 13.11 Inadequate lighting.
- 13.12 Sounding pollution.
- 13.13 Social hazards - causing problems to the community.
- 13.14 A sick child taken for treatment.

14. Flexiplans

- 14.1 Children and Youth in the community - different ethnic groups.
- 14.2 Artifacts and utensils used.

- 14.3 Workshop of the community.
- 14.4 Community development personnel.

15. Analytical Materials

- 15.1 Existing stand pipe.
- 15.2 Washing pots and pans at stand pipe.
- 15.3 Washing clothes at stand pipe.
- 15.4 Bathing at stand pipe.
- 15.5 Ablutions at stand pipe.
- 15.6 Domestic use of water - Washing pots and pans.
- 15.7 Water used for cooking purposes.
- 15.8 Disposal of waste water.
- 15.9 Storage of water for domestic uses
- 15.10 Drinking water.
- 15.11 Washing hands before meals.
- 15.12 Water being carried home.

16. Open ended Story highlighting a outbreak of Diarrhoea

17. Synthesis Game

The group identifies resources through group play - Diagnostic Health and Planning groups.

18. Planning Materials

Visual planning materials depicting their own solutions to perceived problems.

19. Didactic Materials

- 19.1 A game to foster healthy living.
- 19.2 Imparting health information through a comic series.

20. Review of the Total Exercise

A very broad framework or guidelines were available for the execution of this task. As facilitators, we did not wish to adhere rigidly to a pre-set plan but wished to be guided by the way the experience evolved. The dialogic method used in developing these

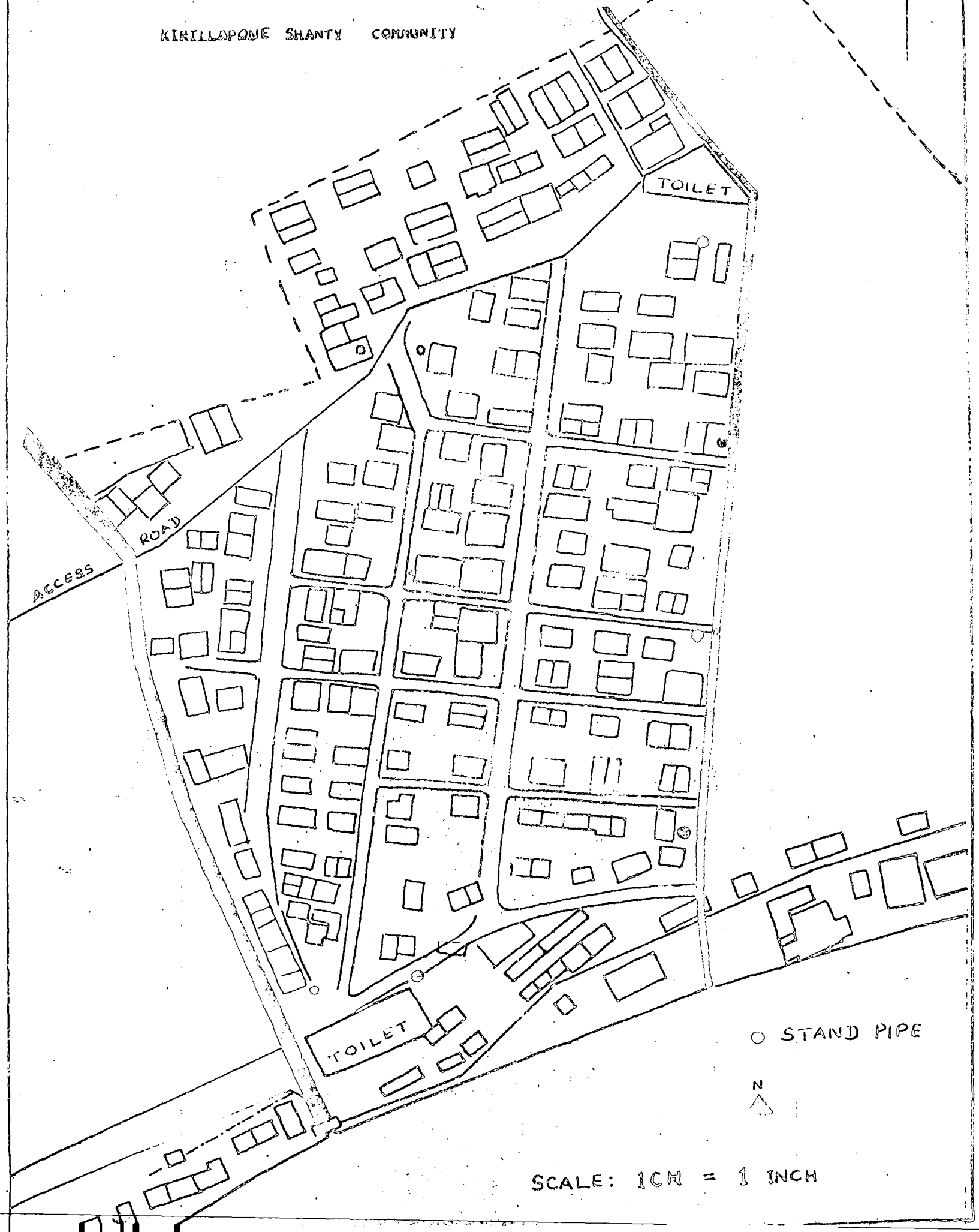
non-formal materials was found to be highly constructive in a community though not much exposed to formal education. The potentials of this community for self appraisal, analysis and planning solutions were revealed through this educative experience.

The selection of this particular community where the U.S. Save the Children Federation is having an ongoing project, served as a sound basis for this type of non-formal education experience.

We sincerely thank Mr. Jake Pihol, C.D.S. Consultant, for giving us this opportunity of participating in a project of this nature and for providing us with the necessary guidelines, Mrs. Vijitha Fernando, National Consultant, for CDS sponsored Project, for coordinating this project. Our thanks are due also to Dr. (Mrs.) Marina Fernando, Director USSCF, and her Staff and finally to the group with which we worked and the community at Kirillapone for their kind cooperation.

Prepared by H.I. Karunadasa
Henry de Mel.

KIRILLAPONE SHANTY COMMUNITY



ACCESS

ROAD

TOILET

TOILET

○ STAND PIPE



SCALE: 1CM = 1 INCH

Sri Lanka

STUDY D
Case history No. 2

Co-operating with Non-Governmental Groups : Small tanks

Sri Lanka boasts of some of the finest beaches in the world. Tropical rains are legendary bringing in their wake fine forest cover and some of the most abundant vegetation in the region. But ironically, there are parts of Sri Lanka where water is a perennial problem drinking water has to be bought in minute quantities during some months of the year and water for washing and bathing or for small agricultural farms is non-existent. The dry zone has some of the finest rivers flowing through it, yet there are areas which these have passed by.

Waguruwela/Walliarana adjoining the Yala sanctuary is one such place. This tiny village is about 350 kilometres from Colombo on the Buttala - Kataragama Road where transport services are poor and villagers live in trying conditions without water for most of the year.

Yet, in the days of the Sinhala kings with their fine water storing and irrigation systems, this area was the location of a number of small irrigation tanks. This system has through the years gone into disuse and the inhabitants now eke a living by burning the country side and surviving on a system of shifting cultivation.

This is where the National Freedom of Hunger Campaign Board has located one of its Wewa Community Development Projects. The FFHC has located 45 small tanks in disuse, set up a demonstration farm and an agricultural training institute to train farmers, a plant nursery and a buffalo bank, a farm and facilities for pure water for drinking.

The FFHC strategy is to help the small reservoir communities in places such as Waguruwela, Tantirimale and other 'dry' areas in the more remote and less accessible parts of the island. The FFHC excludes from its area of activity the command area of the major and medium irrigation schemes which are looked after by the Irrigation

Department

The rationale of the FFHC is that man has lived throughout in these parts in a more or less evenly distributed manner, in ecological balance with the environment for well over twenty centuries. It also works on the theory that man can continue to do so conserving soil and water better than if this area were merely left under forest cover, says the Board's Chairman, Mr. P.U. Ratnatunge.

The FFHC works through Wew Sabha (Reservoir Councils) by entering into a partnership with the people and using the means of storing water as a focal point for rallying the people into forming themselves into these Councils. The people plan and implement their own development programmes.

In the past three years the FFHC has participated in renovating and restoring fifty small tanks - some of these are located in Purana (ancient) Wewa village communities and others in areas where small Wewas are still supporting indigenous communities. There are also others in areas where small tanks are completely abandoned. Communities in these areas have found other means of eking a livelihood, mainly by chena cultivation which means burning the jungle and shifting periodically.

The FFHC concentrates on all these areas. It believes that the disturbed ecological balance as a result of burning the forest cover and other trends which have contributed to desertification can be reversed by the farmers themselves. For this they need guidance, technical know how and financial assistance. They have none of these now. This is the backdrop against which the FFHC is now in a partnership with the farming communities of its target areas spread across the country's dry lands.

A look at the map of Sri Lanka shows the areas which we know as the Dry Zone. With the present massive government projects that are now on going, these areas will soon diminish in number. For the moment the FFHC has located projects in Pallawarayankattu in the North, Uyilankulam in the Mullaitivu district, Tantirimale in the Anuradhapura district, Kumbukwewa and Gomarankadawela in the Trincomalee area, Talandapitiya in the Puttalam district, Parawahagama and Ihala Diggala in the Matale district, Meegaswewa and Wagurupola in the Moneragala District.

This is a big programme. The FFHC launched on it at the beginning of 1979 with a fact finding mission. For a start, it numbered all the wewas shown on the one inch to one mile scale topographical maps of the country. Over 18,000 wewas were numbered, almost all in the dry zone. Many abandoned wewas had escaped identification as they were covered with scrub and jungle and located in areas infested with wild

The actual numbers thus would be higher - and exceed 30,000. Of these about 7000 are still in working condition and supporting wewa communities.

The FFEC's main objective is not the restoration of the small wewa. It is something much wider. Improving the lives of the people of these communities which the major irrigation projects have passed by, helping them to produce enough come first. In many of these communities difficult living conditions prevent them from producing enough.

This results in severe shortages of fruits and vegetables and major food crops during the long dry spell. The people are undernourished and do not have the health and vigour needed for further production. The barest living needs are met and they continue to live in apathy. They exist at a level of rock bottom contentment.

This had to be reached and broken if the people were to establish contentment at a higher level. This was soon apparent at Tantissmale where participation with the FFHC on the small wewa restoration project soon increased production and incomes rose appreciably.

The area too began to develop. More money meant more things to buy. Traders moved in, the children were now well enough to work or go to school. Added money also meant better clothes, even a few luxuries. This meant accelerated programmes for the FFHC.

The FFHC approached the problem in a realistic manner. The village wewa was used as the focal point for rallying farmers into village communities. This was done by reviving the Wew Sabha. Here it is worth taking a look at traditional Wew Sabha.

These existed in the time of Sinhala kings and according to stone inscriptions a few thousand years old, they seemed to have enjoyed a fair amount of autonomy. The organisation was slightly feudal the king through his chieftains used the members to gather revenue and also to ensure that each wewa and its irrigation system were maintained in good order and that the system was capable of producing food for the people and also contributed a fair share for royal revenue.

There were strict laws and regular punishments for offences connected with cultivation of paddy lands. But it was understood that the people themselves settled appeals against such punishments showing true participation by the people even at that time.

Today the Wew Sabhas are NGOs at real grass roots level. The FFHC encourages them to participate in the restoration of the reservoirs and take full responsibility for maintaining and operating the wewa and irrigation systems. This necessitated three factors.

- The Wew Sabha should be capable of generating sufficient funds for repair and maintenance. This was done by the cultivators of paddy lands irrigated by the Wewa contributing seed paddy to the Sabha's maintenance fund,.
- The Wew Sabha should have farmers with enough technical knowledge to be able to repair and maintain effectively and economically. This could be achieved by farmer training programmes and on the job training.
- Co-operation between farmers in organising repair and maintenance and in problems associated with water management was necessary. Twenty to thirty families have control of one wewa. With these limited numbers harmonious working arrangements could be achieved.

A spirit of mutual help and traditional self discipline among farmers have helped considerably to achieve good communication. At Kaiyas (informal gatherings of neighbouring farmers who help each other when the workload is too heavy for one and the communal meal afterwards) are a good example of mutual help among farmers.

Kaiyya is used during many stages of farming, reaping, threshing, gathering. No discipline is enforced from outside. This has the direct result of harmonious management of work without pressure. Even outside harvesting work, as in thatching a roof, this congenial system of sharing prevails.

Thus with full farmer participation, work on restoration is begun. This goes hand in hand with the development of pasture on the lower hill slopes and forest on high ground and along the ridges. This ensures future balance - cattle will feed on the slopes and the forest will supply timber and fuel.

Working on the fact that these wew systems had suited the soil and climate of the area for twenty centuries, the FFHC decided to retain and revive agricultural practices of the area without any attempt at introducing modern technology. For instance, the practice of dividing the irrigated paddy land below a village wewa into three fields - Ipplaya M d v a and the Pahalayaya - according to their location

This has valid reasons - in times of poor rainfall the Wew Sabha may decide to cultivate the upper field only and leave the middle and lower fields for grazing. This created no problems as each family has an allotment in the upper field and the whole cultivated area becomes one compact block and is fenced off.

A properly managed Wew Sabha can provide farmers with agricultural inputs of loans, pay compensation for crop failure and even pay old age pensions.

There are constraints in getting technical inputs in restoration work. Transport facilities and instruments are difficult to find and prevent expansion of programmes. Small Wewas have their own needs as apart from restoration work on large tanks. Small here means tanks that hold less than two metres of water above the sill levels of their sluices. These tanks have been in existence for over two thousand five hundred years and are mentioned in the ancient chronicle of Mahavamsa.

The FFHC is now launching on a programme of training village lads to attend to technical work on restoration. When programme gets going the FFHC will incite farmers on their already existing programmes to send their young men for on the job training. This training will be sufficient for them to implement restoration programmes in their own villages when they are taken up for development in the ensuing year.

No machinery is used in the existing restoration work. The tank bunds are low and the community members can easily attend to this work. Bullocks are used for compacting the earth. There has never been any lack of manpower - with men and women and even children and old people doing their bit.

In Waguruwela this activity has brought the community together as never before. There is the feeling that the reservoir belongs to them - the people. There is thus a natural assuming of responsibility for the reservoir through the Wew Sabha.

Home gardens and homesteads in the settlement area are provided with know how for cultivation, processing and preserving produce. Hand in hand with this is a programme of family health with the stress on pure drinking water.

This project commenced in 1982 and foreign aid component is Rs. 10,082,400. Actual participation and part of the labour were contributed by the farmers through their Wew Sabha.

Waguruwola has many plans for its future. Chief among these is a programme of low cost houses for residential trainees. Short term courses in agriculture, water management, tank technology etc., for farmers will be conducted here. There will also be research and demonstration plots to experiment and introduce low cost new crops. The farm will also be a seed and plant supply unit for the distribution of seedlings and a buffalo multiplication bank for the area's demands in ploughing and milk purposes. Compost manure may eventually be used for a bio-gas plant for energy. There will also be a milk collecting centre.

Waguruwola in November is green and fresh. But during nine months of the year it is dry and arid. Water is the greatest need, for human consumption and for growing in order that the people may live and eat. The FFHC programme has made a dent in a massive problem. In this it has collaborated with the Ministry of Agricultural Development and Research and other agencies within the government.

The primary objective of the Waguruwola programme is self sufficiency in food in this backward and remote area. Some of the most poverty-stricken villages lie in this part of the country. Hunger, unemployment, disease, ignorance and appalling backwardness prevail here. Through the Wew Sabha and the participation of the community, the FFHC aims at improving the quality of life of the people through a programme of more water for cultivation, better facilities for production, more efficient training systems, greater unity among the people without harming traditional methods that have successfully contributed to a self sufficient people in ancient times. There is no attempt to impose alien standards or mechanisation unless it is absolutely essential, there is, however, every attempt to use the resources that are already available, especially the people and the integration of all inputs from other service agencies and work for a harmonious infrastructure on which to build the lives of a few hundred people.

UNDP/NGO WATER DECADE PROJECT

SRI LANKA

Case Study No. E

Co-operating with Non-Governmental Groups : A lavatory without walls
People usually know about digging a simple hole or pit to serve as a primitive latrine. But at best, this is only of temporary use by itself, and at worst, the smell is extremely unpleasant and the pit is a focal point for collecting flies which are a constant source of irritation and carriers of disease. But there is a better way and one that is simple and inexpensive, with minimum materials and meant specially for children under school age. Here is our story:

Three year old Nimal is afraid of the dark. When he wants to use the lavatory he avoids his mother's sharp eye and scuttle to the his overgrown backyard and squats under a bush. He is afraid of the dark interior of the lavatory. The hole is deep and cavernous and too wide for his little feet to rest comfortably. He is, of course, too little to know the damage he is ^{causing} ~~causing~~, of spoiling the environment of his beautiful little village nestling against a hill. He is too little to know that ultimately he is soiling the precious water way and is responsible for causing bowel disease - Killer No. 1 of Sri Lanka's children.

The lavatories which the adults use in his village are all dark and dingy. When he occasionally shuts his eyes and braves it into the fearsome interior, fear spurs his bowels into action before he can squat. His clothes are soiled and he knows his mother will be angry at the mess.....

Thambawita is his village. Hommothagama through which one approaches the little hamlet with its rugged footpaths and rather uncertain bridge over the river where the villagers bathe is a narrow road. The nearest town is Mawanolla, on the main road to Kandy, a flourishing town with its markets and government offices, eight miles away.

Thambawita has remained strangely unspoilt. When we got there one sultry morning after walking over the bridge and leaving our city transport a half mile away, there was an air of excitement. The primary school had just closed and the school headmaster walked with us to the centre of the village to meet officials of the Rural Development Society. If we had expected to be ushered into an office with an important official air, we would have been disappointed.

But walking across the village - still unspoilt by but aocratic and

----- we did not expect any

such thing. We sat on a mud verandah with a couple of chairs collected from the neighbourhood, drank thambili and talked about the village we had travelled from Colombo to see.

The men who formed that RDS were all there. They were farmers with their own little plots of land. Industry had not yet come to that village. No one had left it to look for greener pastures in oil rich lands. They members of the RDS gave their leisure to improve their village. No one was in a hurry to take us to see the new lavatories which had revolutionised the lives of the children in Thambwita. Nor were we. As we chatted we gathered that water-borne disease had carried away a number of children from among them. Bowel disease had been almost a daily occurrence, a mere three years back.

The germ of the idea came up at a training workshop which was conducted by the former EDO of Hammathagama. Mr. R. D. Karunatilaka lives in Hammathagama, commuting to Kegalle for his official work of training.

'We decided to do something about children's lavatories quite some time ago. But lack of money was our main obstacle,' he said. Other members of the RDS nodded their agreement.

The President Mr. Tikiribanda has lived in the village all the sixty years of his life. He knows Thambawita like the back of his hand. He knows its problems and its resources. He meets everyone.

He is also a specialist in the treatment of hydrophobia. His father had been one before him and passed down his knowledge to the son. The unnamed loaves and herbs of his village and the surrounding hills are his allies providing him with the ingredients to cure his fellow villagers. His friends and neighbour R. M. Rambanda is the RDS secretary. They work together and the health of the villagers is their special concern.

Their innate good sense pointed to the need for better toilet facilities for the children who spiled the near by grounds, the drains and the water ways by defecating in the open. They also knew that the adult toilets were the not the answer.

Things did not work out as they wanted, not at the beginning. The whole idea remained a dream for a long time. No assistance came from government officials when they approached at Hammathagama.

Government officials at Hammathagama were obstinate and did not regard special lavatories for children as important. When they did think of them they thought of a hole and a plate and not of what the people actually wanted. And what did the people of Thambawita really want? They wanted to build lavatories for their children

which were cheap and practical and inducement enough for them to stop using the open spaces. They wanted something that would stop the constant pollution of their environment and pave the way to a solution for bowel disease and a healthier life for their children.

That was the beginning of the lavatory without walls - the first of its kind ever to be built in Sri Lanka. It is also, hopefully, the answer to a problem which bedevils sanitary problems in almost every village in the island.

Thamabwita has had the lavatory without walls for one and a half years. Their greatest measure of success: no child in the village is now seen using the roadside or the thicket any more.

The secret of this almost instant success is that the lavatory fits into the cultural pattern of the village. No mother likes to let a toddler out of her sight. In those thickets are snakes and other lurking dangers. Children lose their way, they wander dangerously close to waterholes. A child usually sits down to defecate in his yard where the mother, cooking in the kitchen or washing clothes just outside, can keep an eye on him. The lavatory without walls is built close to homes. They are clean, bright and sparkling with the easily washed cement slab. A slight upward slope keeps it off the ground but not too high for little ^{feet} steps to climb. A wooden cover with a handle is used to cover the hole and this is every child's toy. While he sits with his feet comfortably apart he plays with the two wooden handles. As he finishes he keeps them in place, covering the hole firmly thus keeping away flies. There is no smell - in Hommathagama these lavatories have become play things for its tiny inhabitants.

There is no skin disease now, very little eye disease and no child has been carried away by bowel disease, says proud father Ranbanda.

Toilet training here does not take the traumatic form it does in more developed societies. But there is a semblance of it. Mother keeps her eyes sharp to any misuse and children like Nimal know that the new lavatory must be used properly or everyone will blame him if there is a smell or flies or mess.

Every housewife knows the trouble her man had to go ^{to} get the lavatories. First there were the bureaucratic hurdles. This was overcome when the IYC Secretariat stopped in with a training course attended by Mr. Karunatilaka, former RDO at Kogalle. He is now in charge of district training. At this course the need for a new type of lavatory for Thamabwita surfaced and children's Secreta-
~~ment~~ ~~has~~ ~~been~~ ~~discussed~~ ~~with~~ ~~the~~ ~~Thamabwita~~ ~~RDS.~~

Once the funds came in there were no other problems. The villagers were ready to supply labour. The agricultural economy leaves free time. Thambawita has no industries and the smell of Middle East money does not pervade here. With free and willing labour, money was necessary only for cement and iron. Thus the lavatories have the added advantage of being low cost. The children's Secretariat paid the RDS Rs. 5190/= for 54 lavatories. One can easily work out the cost of one of these.

In terms of actual welfare to its children Thambawita has gained tremendously from this simple outlay. 89 families have benefited and the special blessings have reached 119 pre-school children.

What happens when these children grow big enough to want privacy? Thambawita RDS and the children's Secretariat are ready with the answer. Already a project to build adult lavatories is on and when little children like Ninal grows big enough to want an adult size lavatory, there will be one for him.

"We cannot expect a child who has grown up using a lavatory to use the roadside or the thicket when he grows a little older", says Lalani Fernando Thambawita's now RDO. She lives close by and her work takes her on the field to every part of Hommathagama.

Her aim is to introduce the lavatory without walls to other villages of the area. She arranges for training in sanitation by the Public Health Inspector three times a week, walks many miles a day reluctant to waste her time waiting for the bus and carries the message of sanitation and the news of the practical benefits of this pilot scheme.

UNDP/NGO - Water Decade Project
Consultation Meeting

Objectives

1. To introduce simple technological models of water and sanitation to N.G.O. participants for their knowledge and participation in the expansion of the use of such devices to promote safe water supplies and better sanitation.
2. To emphasize the use of O.R.S. to prevent dehydration conditions of infants and pre-school children.
3. To involve N.G.O. participants in a discussion with regard to the construction and use of such devices.

Technical Models and Illustrations

Water Supply

1. Drum Filter - A working model.
2. Drum Filter - Sectional view with construction details.
3. Pot chlorinator - A working model.
4. Hand ~~pump~~ ^{pump} - Demonstration of an Indian Mark II pump; the working parts of the pump.
5. Hand pump and a pot chlorinator - Typical installation with sectional view of pot chlorinator.

Sanitation

6. Waterseal latrine - Cross sectional view of a typical offset - pit model, with construction details.
7. Waterseal Latrine - Direct pit type; Standard Sri Lanka model. (constructed and demonstrated out side).
8. Waterseal latrine - Same as above, for pre-school children (constructed and demonstrated out side).
9. Waterseal latrine - Construction forms and details.
10. Pit Latrine - Typical direct-pit type (common in Sri Lanka)
- Offset - pit type.

Checking Diarrhoea

- 11. Some of the contributing factors for the causation of diarrhoea (photographic presentation).
- 12. Signs of dehydration (photographic presentation).
- 13. Composition of oral rehydration salts and other substitutes.

11. Drum Filter

1.2 Construction

Select an oil drum or a tar barrel. This drum/barrel is usually 22" in diameter with a height of 35" (a tar barrel is smaller).

Paint inside and outside of the drum with good quality water proof paints, preferably a non leaded/Zinc Oxide or epoxy paint.

Fill the bottom with cement mortar and have a V type floor sloping towards the outlet where a 1/4" or 1/2" tubing is fixed.

1.2 Fill the Drum as follows, beginning from the bottom

- 2 - 3 mm size to 2" levels.
- 1 - 2 mm size to 4" levels.
- 0.5 - 1 mm size to 6"

take 6 baskets (ordinary ratan baskets) of river sand and wash thoroughly. (three to four times or more).

Fill the cleaned sand to 26" level. Size of sand should preferably be well graded. (sizes 0.15 to 0.2 mm).

Fix about 2 to 5 feet of a 1/4" or 3/8" plastic the outlet of the tubing to drum.

Dispension plate - Fix a perforated pan with 1 mm holes at 27" level to disperse raw matter poured into the drum and to prevent the disturbance to the surface of the filter.

1.3 Operation

Raw water poured into the drum filter should be as clear as possible. If it is not clear and contains suspended matters, clarify it in a separate drum or container with alum or other clarifying agent.

Fill the drum with raw water. It is important that no air bubbles are trapped in the layers of sand during the initial filling. This can be accomplished by filling the drum through the outlet pipe (filling it backwards).

Now the filter.....

Now the filter is ready to start operation but it is not yet ready to provide a safe quality water. Allow the water from the Drum to flow out of the plastic pipe into a container.

The rate of flow should be about 10 gallons per hour or less. This can be regulated by either raising or lowering the plastic pipe deliver end.

The drum will need topping up with about 3 to 4 gallons of raw water every 20 minutes.

The water level in the drum should never fall below the perforated dispersion plate placed at 27" level.

The filtered water of the first 72 hours should be considered as raw water and may be allowed to drain into or added to the raw water container.

The filtrate after 72 hours of initial operation is usually safe for drinking. Water for drinking should be boiled and cooled during that period.

The filter should be operated continuously for 24 hours a day. A reduced rate of filtration (by raising the outlet and of plastic pipe) may be used during the night or during the periods when no one is able to attend to it for an extended period of time.

Intermittent operation is not advisable.

If filter is operated carefully it will work for a period of 2 to 3 months, depending on the quality of raw water, before cleaning operation is needed.

To clean the filter, remove the dispersion plate, drain water level to about 1 inch below the surface of sand. Scrap off about 1/2 inch of the top sand layer. Fill the drum backwards with good filtered water. Then start the operation again. The initial 24 hours period after cleaning of the filter should be considered not safe for drinking. Cleaning of filter by scraping off about 1/2" layer may be done till the sand layer falls to the level of about 22". i.e. 6 to 7 cleaning operations. After this the filter should be filled to the 26" level again with clean washed sand.

2. Pot Chlorinators

Treatment of water for a community in a rural area using well water is not practical in most instances. But it should be disinfected to protect the public health. Pot chlorinators are very effective. For a well from which water is drawn at a rate of 1000 litres per day, a pot containing about 1.5 kg. of Bleaching Powder mixed in 2 parts of sand should provide adequate chlorination for 1 week. Details of construction are shown on the models.

3. Hand Pump

Use of buckets to fetch water from wells or springs pollute the water. Contamination can be prevented by the use of a hand pump.

An Indian Mark II hand pump is demonstrated. It is the type most widely used in the country and presently considered to be most durable, economical and easily maintained. There are other makes and models being subjected to field trials under the UNDP/WORLD Bank Project.

4. Waterseal Latrines

Cross sectional view of a typical waterseal offset-pit latrine is demonstrated as a model. It is most widely used in the sub-urban and rural areas. It is even found in the dry zone areas of the country because it needs very little water to flush it. Defective construction can cause objectionable nuisance and odour.

(i) Offset pit type

The purpose of the model is to highlight the important points of constructional details to N.G.O. participants and stimulate discussions as regards the constructions, the use and the component costs of the unit.

An estimated cost break down is given below. Costs may vary from place to place and savings can be made on local availability of material and labour.

WC Pan	1 No.	Rs. 40 to 175 and freely available from Health Dept.
3" PVC Pipe	3 feet.	Rs. 24
Bricks	325 Nos.	Rs. 125.00
Cement	100 Bags	Rs. 200.00
River Sand	8 Cu. Ft.	Rs. 50.00
Metal	2 Cu. Ft.	Rs. 50.00
Reinforcement (wire mesh)	9 Sq. Ft.	Rs. 50.00
Mason and Labourer	2 days	Rs. 180.00

(ii) Direct pit type

The standard Sri Lanka model is constructed and demonstrated outside. The B.M.C. manufactures them and are available at the following prices -

The squat plate Rs. 117.00

The bowls with water seals Rs.

The squat plate....

The squat plate with the water seal fitted is placed directly on the pit. The construction is simple and the cost is low.

The same type, in reduced scale, designed for pre-school children is also available.

The squat plate

The bowls

The construction method and the forms used are illustrated in the drawing attached.

5. Pit Latrines

Two types of pit latrines are illustrated.

- (i) The direct pit latrine.
- (ii) The Offset-pit latrine.

Direct-pit Latrine: This is the cheapest type. No special skill is required for its construction and practically nothing is needed to be bought except the squat plate or the platform.

Fly and Musquito breeding problem, nuisance of odours and pollution to ground water bodies are the major objections to the use of this type of latrine, particularly those that are constructed open without any means of protections. These problems can be avoided if the latrine is properly constructed and maintained.

- (a) Prevent fly and musquito breeding by keeping the pit covered and dark.
- (b) The squat plate/platform floor should always be clean.
- (c) Prevent odour by keeping the pit well ventilated.
- (d) Pollution to ground water body is common to all types of latrines. May be avoided by selecting a site at the down-stream of the direction of ground water flow and keeping it at least 50 feet away from a well.

(ii) Offset-pit Latrine:

It is known as the Reed Odourless Earth Closet (ROEC). The illustrated model is shown with the pipe shoot installed at a lower angle (1:1) than the ROEC (3:1). This reduces the requirement of raising the floor level high and making the pit too deep reducing the cost of construction. (1:1) slope is successfully being used in some Asian countries where water is used for cleansing purposes (ablution). It is the usual practice in Sri Lanka and is possible to adopt this slope. Any type of material which is practical, may be

used in...

used in the construction. For example Wooden Planks nailed together to form a rectangular sheet and forming a long rectangular opening at the squatting plate has been used successfully. Old corrugated iron sheet flattened and made into a tapering oval pipe or a semi circular shaped G.I. Sheet through with top covers have also been seen to serve the purpose. Pit covers may also be of different materials. Even bamboo matting soaked in kary oil and covered with earth have been used to last 3 to 5 years.

These are some alternative possibilities of having a sanitary latrine for a rural community. Disposal of human wastes without a latrine or through an open latrine will allow the communication of diseases to the community.

6. How Diarrhoea is caused?

Diarrhoea is caused by very minute living organisms called germs. These germs can only be seen by the use of microscopes and they can be virus, bacteria, protozoa or worms passed in the stools of either a diarrhoea patient or from the stools of a person (carrier) who does not suffer from the disease but passes disease causing germs.

The first panel on diarrhoea illustrates three of the most common causes for diarrhoea. These are as shown in panel - the contaminated water, food, hands and containers. Contaminated water is responsible to a greater extent for the causation of diarrhoea in rural areas of Sri Lanka. Poor personal hygiene is also a causative factor transmitting the disease from person to person. Highly feasible areas as contaminated hands, food and containers are also illustrated to reflect some of the aspects of poor personal hygiene.

7. Signs of dehydration - (Panel 2)

The diarrhoea causing germs destroy the minor surface of the bowel or by producing toxic substances which alter water and salt movement in the bowel. Water and salt are drawn from other parts of the body and poured into the bowel lumen. This moves out as diarrhoeal stool. Sometimes some water and salts are moved up as vomitus.

This loss of water and salts produce physical changes resulting (if not treated properly) finally the dehydration. Some of the prominent areas are illustrated in the panel. For the information of the NGO participants the physical changes that are brought about by the loss of water are given below.

- 7.1 The body makes a natural demand for water and the patient feels thirsty. The patient's tongue will be dry because there is not adequate fluid to cause secretion of saliva in the mouth.
- 7.2 There is loss of tears from the eyes. This too is because there is not enough water for this secretion.
- 7.3 There will be reduction in urine which may finally stop. This too is because the circulation of blood to the kidneys (organism that produce urine) becomes weak or stops due to reduced volume of blood as water is lost in stools.

- 7.4 The eyes get sunken into the bone socket.
- 7.5 The babies have on the top of the head a soft area called fontanelle. These also get sunken.
- 7.6 The skin loses water and becomes loose. The normal skin when picked with two fingers comes back to normal position soon. It is loose because of loss of water and takes sometime to come back to normal position.
- 7.7 The fingers get wrinkled like a washerman's hand,
- 7.8 If the patients body is touched the body will be cooler than normal (The body temperature is low).
- 7.9 The pulse will be feeble and gradually it will be difficult to feel the pulse.
- 7.10 The heart beat will be faster in early stages. It will proceed towards slow rate and gradually will stop.
- 7.11 The breathing becomes rapid.
- 7.12 The patient will feel weak.
- 7.13 The voice will become hoarse and faint.
- 7.14 There will be a pulling of the muscles. This is called cramps and this will be complained of as pain.
- 7.15 The child may get convulsions.
- 7.16 The child may go into unconsciousness or coma.

The above signs are called signs of water loss (dehydration). These are mainly due to the fact that the input of water and salts are not enough to balance the loss of water and salts in diarrhoea and vomiting. This loss of water and salts is faster in infants and young children than in the grow-ups. It is also faster in hot climates. If we take a tender or young shoot or bud it withers away faster than the matured stem.

8. ORAL REHYDRATION SALTS

There is a special mixture of salts which is to be dissolved in water and given. The mixture of salts is available in packets and is called O.R.S. (Oral Rehydration Salts) The packets are made for mixing in one litre of drinking water. The water for mixing O.R.S. solution should always be as clean as possible. It is best to use boiled and cooled water for making the solution.

Fresh O.R.S. solution should be prepared each day in a very clean vessel. The vessel should be kept covered. Left over solution of the previous day should not be used. All left over solutions of the previous day should not be used. All left over solutions of the previous day should be thrown out and the vessel should be washed with clean water for reuse.

8.1 WHAT DOES THE O.R.S. CONTAIN?

It contains the following ingredients in the amount against them.

<u>Ingredient</u>	<u>Amount</u>
- Glucose	20 grams.
- Sodium Chloride (NaCl) (NaHCO ₃)	3.5 grams.
- Potassium Chloride	1.5 grams.

This is for making 1 litre of solution.

9. WHO SUPPLIES THE O.R.S. AND WHERE ?

- * The Public Health Midwife.
- * The Public Health Nurse.
- * The Medical Officer of Health.
- * The Rural Dispensaries.
- * The Outpatient Departments of all Hospitals.
- * Peripheral Units.
- * Rural Hospitals.
- * Base Hospitals.
- * Provincial Hospitals.

(For inpatient use bulk preparation, from basic ingredients to meet the above requirements.)

10. HOW IS O.R.S. USED?

10.1 Administer O.R.S. solution as soon as diarrhoea begins. Any delay may worsen the patients condition. As shown 1 (b) the level of water indicated therein would not have gone down if replacement is made early.

10.2 The O.R.S. solution can be given to infants and young children with a spoon. It is necessary that the mother will have to keep the child on her lap with the child's head raised up.

Refrain from giving O.R.S. solution when the child is unconscious or asleep. This is to prevent the child getting choked.

10.3 Administer about 2 to 3 tablespoons of O.R.S. solution to infants and young children once in every five minutes.

* Take....(

- * Take note that the child may vomit if large quantities of O.R.S. are given at a time.
- * Give him more if he is willing to take more.
- * Remember whenever the child's body feels to have more he will demand more of O.R.S.
- * Give O.R.S. solution to elderly children and adults and instruct them to drink it by using a clean glass or cup.
- * Take note that it is wiser to keep a stock of O.R.S. solution by the bedside of elderly children and young adults.
- * Remember that the amount of O.R.S. solution given should be a little more than the quantity of stools and vomitus passed.
- * Do not stop the administration of O.R.S. solution even if there is vomiting.
- * Note that a patient may vomit out part of the oral fluid however, the rest of the fluid rapidly gets absorbed and once when the lost fluid is replaced the patient stops vomiting.
- * Continue the administration of O.R.S. as long as the persistence of diarrhoea.
- * In between the O.R.S. solution give plain water (boiled water) tea, barley water or soujee water.
- * If the child is a breast fed we must instruct the mother to breast feed him in between O.R.S.
- * If the child is on cows milk or powdered milk instruct the mother to feed the child with cows milk taking into consideration to dilute the milk with an equal quantity of water.

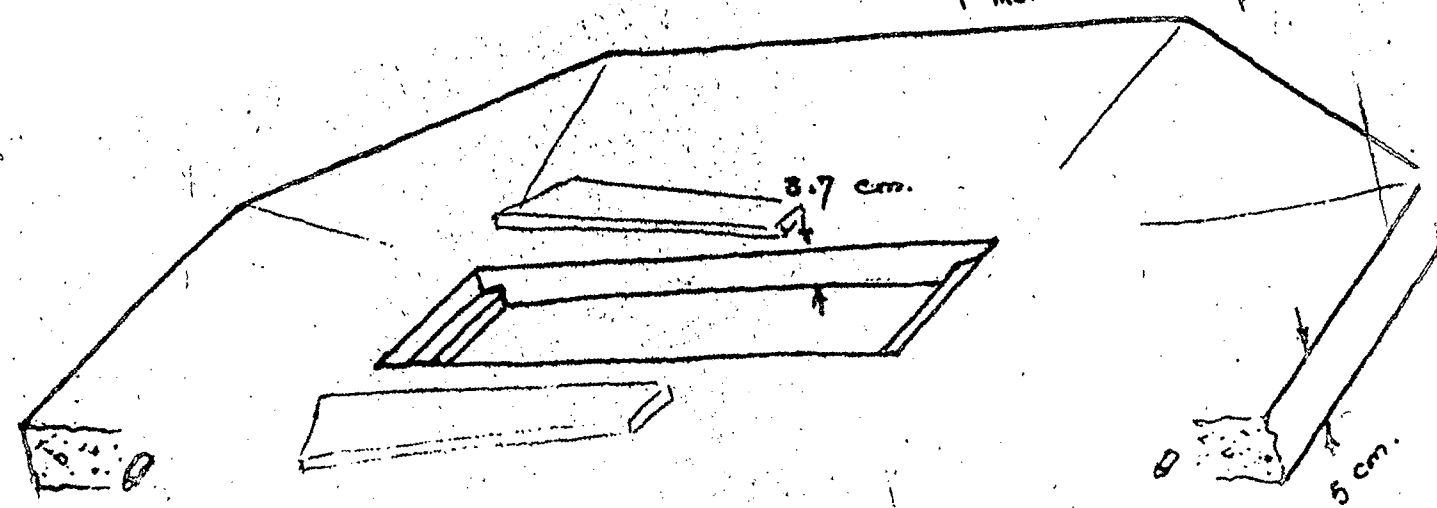
11. WHAT CAN A MOTHER GIVE AS SUBSTITUTE FOR ORANGE O.R.S. SOLUTION
IS MADE AVAILABLE ?

Rice conjee is a good substitute until O.R.S. available. This conjee is available when rice is being cooked at home or could specially be prepared for the purpose. To a cup of conjee a pinch of salt could be added to make it tasty. It is necessary that the mother should taste it before giving it to the child. Rice conjee could even be given in between the administration of O.R.S. solution.

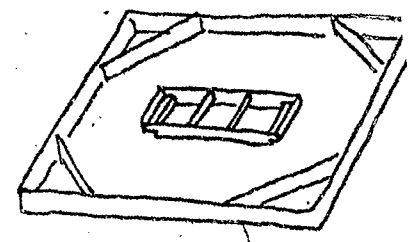
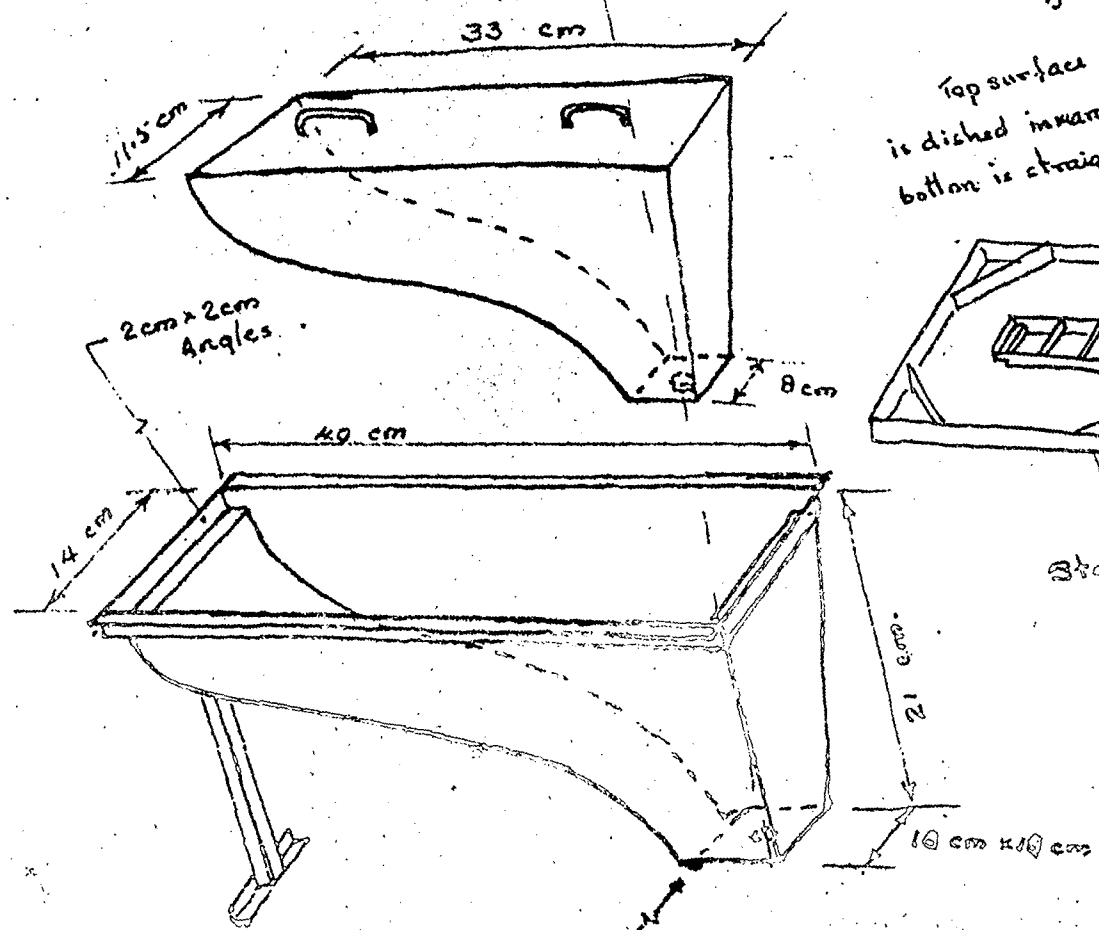
Other substitutes are:

- | | |
|------------------|---|
| * Barley | * Tea |
| * Soup with salt | * Coffee |
| * Coconut water | * Mustard (a temporary substitute only) |

1 meter x 1 meter octagonal plate



Top surface of plate is dished inwards but bottom is straight and flat

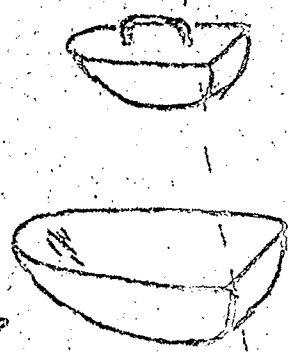


Steel forms of Squat Plate

Typical Sri Lanka Pour Flush Latrine Plate and water seal forms.

SKETCH Not to scale

water seal is made separately and fixed to the bowl later.



J. K. Kachad

SRI LANKA
NATIONAL NGO CONSULTATIONS
FOR THE INTERNATIONAL
DRINKING WATER SUPPLY
AND SANITATION DECADE

DRAFT ACTION PLAN

CONSENSUS

STRATEGIES

Colombo, 8 December 1982

C O N T E N T S

This draft action plan is separated into three sections.

Section One, entitled "Consensus," outlines the major recommendation of the Consultation, after a careful consideration of both the issues and the possibilities for future coordinated action. That involves the creation of an NGO Decade Service, with support from NGO's, Government, UN System and Bi-Lateral agencies. The Service's "Terms of Reference" are outlined in this section.

The Service's first major duties would include the launching of three specific strategies, described in Section Two, "Strategies." These action proposals relate to:

- 1) A Decade Pilot Programme for non-formal education and communications.
 - 2) A plan for extension of training in new non-formal approaches.
 - 3) A description of NGO/Gov't collaborative Decade projects.
- Any one of these strategies can be started on its own; but they have been collectively placed within the context of the NGO-Decade Service's first activities...as a coordinated set of actions.

Finally, Section Three briefly describes a general approach to low-cost technology extension that could be a guide for future Gov't/NGO efforts in this area.

Section One

A Strategy for an NGO Decade Service

CONSENSUS:

It is the Consensus of this Consultation that an NGO Decade Service should be established to assist NGOs in Decade-related strategies.

It is further recommended that this be an independent service, established with funds channelled through Government. The service would be guided by a Governing Board of NGOs and Government, with advisory participation of UN system agencies and Bilateral donors.

This governing Board would be constituted in the following way:

1. Broad assemblage of NGOs would select eight representatives. These representatives would convene a meeting together with representatives of the Ministry of Local Government, Ministry of Plan Implementation, Ministry of Health, Ministry of Social Services, and the Ministry of Finance and Planning.
2. A Constitution of the Governing Body would be agreed upon by this group. At this meeting the service's terms of reference would be reviewed. Strategies for pilot programme, training extension, and collaborative decade projects recommended by this consultation - and included in this draft action plan - would also be considered.

Terms of Reference for the NGO Decade Service

1. The service would first facilitate and support the execution of three major action proposals as attached (Section 2)
2. The Service would later act as a facilitator for better alignment of NGO and Government activities in Water Supply/Sanitation and related sectors specifically:
 - A. The service would help match NGO action with available technical financial and other resources (e.g. supplies and "Hardware")
 - B. It would assist NGOs with planning management, project formulation and evaluation.

C. The service would, on its own and in co-operation with existing training institutions, provide short and long term training to NGOs and select government participants. Starting with the strategy for training outlined in Section Two, it would help to augment and professionalise rural NGO staff and other local development workers; as well as urban community workers from slums and shanties, and their community counterparts. Training would eventually focus on these areas in coordination with existing national resources ;

- community workers: roles; development of planning skills, social action techniques and materials; local needs assessment and organisation; internal and external resource assessment; liason with government services; employment counselling and market research;

- NGO project formulation
- NGO Management Development
- Technological training; low cost adaptive technologies and maintenance of systems (see E)

Training would be designed and based upon NGO "client" needs, and would include a system of follow-up for those participating organisations.

D. The Service would gradually build a capacity to provide Information and Communication Support Services including :

- Development of specific educational aids; participatory materials and other communication support "software"
- a clearing house for materials already developed
- a referral service to put NGOs in touch with information sources or give them access to information materials.
- Net working of NGOs with international and national training resources.
- Periodic workshops on specific technical/communication subjects related to decade action.

E. Technology Resource Services:

The Service would co-operate with existing technical services to more fully develop NGOs capabilities in appropriate and low cost technology extension.

F. Linkages with Services

The NGO decade service would assist in linking NGO programmes with the available services of municipal and local government authorities.

On the following pages, three recommended decade action strategies are outlined - along with the steps necessary to now set them in motion.

SECTION TWO

STRATEGY ONE

PILOT PROGRAMME DESIGN

NEW NON-FORMAL APPROACHES FOR COMMUNITY
INVOLVEMENT IN WATER AND SANITATION

Communication
Support

6 sectors

Premises :

The consultation utilised case study information and other experiences with educational methods and materials in its consideration of the subject. The consensus is that new, non-formal education and communications approaches are a major, essential alternative to conventional, directive education. Their potential for drawing people into creative analysis and action, and for ensuring the lasting quality of behavioural changes, make such methods and materials especially relevant to the highly personal realm of water supply and sanitation.

It is felt that the area of non-formal education and communications has not been as adequately explored as conventional methodologies. The decade provides an important opportunity to do this.

Programme Objectives

To develop through an intensive area strategy, interactive methods and communications support materials to improve :

1. Community assessment of needs in water and sanitation, as an entry point to other social and economic sectors.
2. Community organizing, action; and the maximizing of indigenous resources.
3. The making of effective links between community, technical and other external resources.
4. Skills of community motivators, as approaches are developed; development of valuable training methodologies.

PROGRAMME ACTION STRATEGY

At National Level :

1. A. The programme is sponsored by Ministry of Local Government;
B. It is initiated by the NGO Decade Service.
2. The Ministry of Plan Implementation facilitates Bi-lateral, UN, and other resources to the NGO Decade Service for the pilot effort.
3. The UNDP, UNICEF and WHO are prepared to provide technical information, and communications support assistance to the programme.

Local

: 2 :

ACTION-LEVEL EMPHASIS

4. A. The programme is coordinated at the action-level through the pradeshiya mandalaya involved; and by the gramodaya mandalayas in the specific pilot area.
 - B. If more than one pilot area is initially selected, different zones (eg., coastal, dry, plantation) should be considered for comparative purposes.
 - C. The likely resources for initiating the programme at the action-level are : Rural Development Societies, School Development Societies, village temple societies; and other NGO groups that are active locally.
5. A. A special group of motivators, drawn from different NGO's (such as those mentioned above), is selected to start the experimental programme.
 - B. Local or District Communications support personnel, eg., Artists, are contacted to help in on-the-spot materials development.
6. The programme focuses on needs and action by special (as well as general) community groups, such as women's and youth societies.
7. The programme has an ongoing evaluation system. Approaches and materials are revised based on regular feedback from workers and communities.

GOVERNMENT PARTICIPATION

8. Village-level officers are involved and informed as village projects develop.
9. Health Department field officers in the area, for example midwives and P.H.I.'s, are utilised as resource persons as necessary. Periodic contacts are made to keep them involved in the progress of non-formal strategies.
10. At a point where the programme has accumulated significant results, eg., several water, sanitation, other socio-economic projects begun - an orientation course is conducted for selected health Department field officers, and for all village-level Government officers.
11. The above mentioned officers then assist NGO's to carry out follow-up activities with the participating villages.

UN SUPPORT

12. For this programme, the UN system assists the NGO Decade Service in these specific areas :

A. INFORMATION

Clearing of information related to technological options, health practices, etc; and supply of data important to health, environment etc. etc.

B. COMMUNICATIONS

'Communications support' assistance, eg., help in developing original methods and materials, in reproducing materials later, etc.

C. FINANCING

Assistance 1) In financing the pilot effort; and 2) Later, in the expansion of the effort to other selected areas.

BI-LATERAL SUPPORT

13. Bilaterals fund overall programme or specific components, eg., materials, reproduction, programme support costs, etc.
14. They also provide or give access to required technical assistance. It should be noted that, for both UN and Bi-lateral support, the term "Technical Assistance" indicates Indigenous National expertise as well as technical co-operation from outside Sri Lanka.

REPLICATION

15. The results and approaches that emerge from this activity are evaluated, revised, and replicated elsewhere in the country through NGO's and Government agencies. The NGO Decade Service can facilitate this.
16. The outcomes also are incorporated into training design for NGO and Government Decade Action by the NGO Decade Service.

NEXT STEPS FOR STARTING STRATEGY

1. Consultation approves of pilot programme in principle.
2. UNDP consultation follow-up arranges for first meeting of NGO Decade Service Group (with NGO and Government Representatives as outlined - plus UN and Bi-laterals) ... or a group of similar composition to select pilot area(s).
The Ministry of Local Government is an important resource as sponsor of this programme.
3. A full programme description is drawn up, and circulated for funding if necessary, by NGO Decade Service and M.L.G.
4. Programme is initiated as funds are secured.

STRATEGY TWO

PROJECT : DECADE TRAINING AND ORIENTATION IN NON-FORMAL EDUCATION/COMMUNICATIONS

Premises :

The main premise of this project is that by making training in non-formal approaches available to a range of interested agencies, new avenues for effective local participation in the decade will be opened. In addition, ongoing participative activities will be reinforced, and learning will be intensified.

As NGO (and Government) development action personnel apply such training, and promote high local involvement, it is also expected that A) existing services in the area will be made more effective; and B) new, appropriate services may be identified and arranged for.

Objectives

1. To develop motivational skills and professional capabilities of NGO and selected Government personnel.
2. To facilitate creation of non-formal materials, and expand their use.
3. To promote effective use of water and sanitation as an entry point for integrated development.
4. To encourage relevant policies and programming at national level.

PROJECT DESCRIPTION AND STRATEGY

This project involves a two-pronged strategy, of "Orientation" and "Training."

Orientation, and sharing of knowledge and experience, will occur at the National and District Levels for :

- A) Wider support for new non-formal approaches.
- B) More relevant Government and NGO programming.

Training, and field applications of new approaches, will occur at the District and Gramodaya "Action" Levels. In the decade, training will assist development workers to use non-formal approaches for community :

Determination
of new needs

Awareness of
problems and
potentials

Planning of
projects

Review/Analysis
of Activities

Organising and
use of indigenous
resources

Project
carry-out and
monitoring

Use of
Technical info and
other external resources.

1. The training will be focussed at the District and Gramodaya "Action" levels.
2. Training design will be generic but directly adaptable to the local health, environment, and services situation of the areas in which it is being applied. (For example, in remote rural areas, NGO's may have to concentrate largely on preventive and self-corrective means of dealing with health issues).
3. Training will be a combination of workshop and field-based experiences, held over a period of time (eg., one to several months). It will focus on the development or adaptation of interactive methods and materials for specific groups (eg., women's societies), as well as broad-based groups, in the area.
4. Training itself will be participative, utilising exercises and materials to help trainees A) Build decade-related knowledge, and; B) Sharpen Motivation and Project Management skills.
5. A first training design is developed, utilising other training resources, decade material, and if possible experience from the non-formal pilot programme (See Strategy One).
6. First trainings, of 1-3 months in length, are organised with NGO's in A) 2 deprived urban areas; B) 2 rural areas, eg., dry zone, estates. Training combines periodic workshops with intensive field application.
7. Evaluations are conducted with participating organisations in the first selected areas.
8. a) Follow-up is conducted in each area on the basis of evaluations. In some cases, this could signal the start of a new or expanded training cycle.
b) Evaluations are consolidated; the overall training design is revised and improved.
9. Based on these training experiences national and district level "Orientation" is designed - for sharing of experiences, new ideas on programming, and strategies to support NGO non-formal applications.

NEXT STEPS TO BEGIN STRATEGY

1. Consultation results in positive reaction to training concept.
2. UNDP consultation follow-up arranges for meeting of national decade service group - or a group with similar NGO, Govt., UN and Bi-lateral participation - UNDP follow-up provides the group with : A) A specific agenda for important decisions that must be taken and B) Resource persons (if needed).
3. Among the key decisions in this and future meetings, the group must determine how to develop a full description of this training strategy for support. Also, how a training team can be assembled, and who can assemble it. United Nations support for the strategy, especially in terms of communications

support assistance, and associated expertise, should be explored. Interested Bi-lateral funding sources should be identified.

4. As the funds and other support are secured, and the training team assembled, the first areas can be selected. The training design phase can then begin.

STRATEGY THREE: BACKGROUND and Strategy:

1. The basic idea for this project described on the following existed before this consultation as some NGOs were already working on variations on the approach and had plans for future action.
2. The consultation process expanded this project approach to place more emphasis on NGO involvement in Health Education.
3. Some NGOs such as the The Girl Guides Association and the Zonta Club of Colombo are planning to apply this comprehensive approach in Kalutara and the Mahaweli settlement area in the first part of 1983 as part of a wider programme to supply water facilities through UNICEF. Funds are being sought for this health education area.
4. Next step: In order to replicate this approach elsewhere it is recommended that the National Decade Service should identify two or three different areas where NGOs, Government, Unicef and funding agencies collaborate before the latter part of 1983.

Water Supply Project with People's Involvement Better Health for All

The goal is to provide the basic needs as identified through community participation - The main fields being health, water, housing, sanitation, Education food. The specific objectives of the projects are

1. to help provide safe and easily accessible drinking water in rural areas.
2. To help provide sanitary wastes disposal.
3. Educate the community on proper storage and handling of drinking water; proper use and maintenance of sanitary facilities.

Provision of facilities alone will not provide the desired improvements unless education is part of the programme.

To achieve this objectives, action strategies have to be formulated. The acceptance of the NGO by the community is of paramount importance. One approach is through setting up of services such as pre-schools, milk feeding centres, maternal and child health services. This has been found to be successful. Another alternative is making contact through local broad based organisations. Caution has to be exercised in the approach to avoid any partisan or elite group. Skills training programmes for youths can also gain acceptance.

The formation of community organisations is part of the action strategy to create leadership and involvement. Mothers groups, youths groups, farmers groups, rural development societies, community centre will draw in all sectors of the community. It is through these bodies that an awareness of the need for pure drinking water and proper sanitation can be created through communication, education and change of attitudes. Once the credibility of the NGO has been established, the it can help on ensure that the specific objectives can be planned and implemented, though the methodology will differ according to the nature of the project.

Project 1 - To provide protected wells with pumps and latrines in a village in the wet zone.

The need for this had been identified by the community in its dialogue with the NGO.

The following phases were identified in the carrying out of the project.

- a. Feasibility study
- b. Design
- c. Implementation
- d. Operation and maintenance
- e. Monitoring
- f. Evaluation and follow up.

Taking the question of resources for each phase, the agencies involved or to be involved were next identified.

Feasibility - Man power for this was to be provided by the NGO; by exists by the government. The Community is assisting in the study.

Design - While the community would participate, the NGO would provide the technical knowledge, calling on the government depts. for advice with guidelines from the UN specialised agencies. The government depts. had specification and the UN experience from similar programmes in other countries.

Implementation - An important phase here the NGO would supply materials, training, supervision general education and motivation to maintain the programme. The community's involvement would be provision of material and labour, the government with material, supervision and training as well as funds as this project is part of government planning (Health Ministry). The balance funds would be from UN and bilateral agencies.

Operation and Maintenance

Training and education to be provided by NGO. In order to involve the community the man power should be provided by ^{them} (UN). Training and education can also be part of the contribution by the Ministry of health, local government etc. As far as possible locally turned out machinery should be used so that spare parts are readily available.

Evaluation will be by the NGO's, community and the funding agency.

Monitoring and follow up are very essential in order to see whether these facilities continue to be used and if they are not, what further action and follow up is necessary.

Throughout these different stages motivation of the community will be a continuing process by the NGO.

(Annexure A)

Project No. 2

Promotion of effective utilisation of pure drinking water and sanitary facilities

The need for the project arises where the expected results from the provision of facilities for pure drinking water and latrines are not realised. The problems can be

1. behavioural i.e. lack of knowledge, traditions and attitudes, wrong practices.
2. Deficiencies - technical, operational, maintenance, quality.

NGO's can fill a gap in that field of education as this is sometimes lacking in government programmes.

The first step in the project will be situational analysis where a survey has to be done to identify the specific problems. The survey can be done by the NGO concerned or in collaboration with other NGO which have this capability. The community will play a participatory role while the expertise of the University staff, Health Ministry, Local Government

Action Strategy

A. Behavioural Change

- a. through Health Education . This programme will be at different levels e.g. pre-schools, school children, community.
- b. Technical modifications e.g. if pollution occurs because of open wells, covered wells may be an alternative.
- c. Incentives - through subsidies and awards. organisation of competitions, help where necessary)

B. Correction of Deficiencies

Technical - Faulty design or construction (this may result in contamination of the water through leaks or seepage) Advice and funds are needed to correct this.

Maintenance and operational - training in the field is very essential. Women can be drawn into this programme. Spares should be freely available and repairs carried out speedily.

Quantity and Quality - The quantity can be affected if the facilities provided are inadequate. e.g. the number of families per well.

Failure in the source of supply can affect quantity.

Quality can be affected by pollution.

The agencies involved in providing services at each step in the project are given in Annexure B.

Annexure A

Project I

Project I Resources	NGO	Community	Government	UN	Bi-Letteral
Feasibility man power	NGO	✓	✓		
Design	Technical & motivation	Participatory	Advisory	Guida lines	
Implementation	Motivation Training Supervision Material Funds General Education	Material Labour	Materials Funds Technical Supervision Training	Funds	Funds
Operation & Maintenance	Training Education	Man Power Participatory	Training education Provisional spare parts	Spare Parts	
Evaluation	✓	✓		✓	✓
Monitoring				Funding Agency	
Follow-up	✓	✓	✓		

Annexure B - Project I

<u>Resources</u>	N.G.O.	Community	Government	UN	Bi-Lateral
<u>Action Strategy</u>					
A. Education	Training	Participatory	Education	UNICEF	✓
Pre school	Organise competitions		Health	WHO	✓
School	programme		School of Social	UNDP	✓
Community	provide incentive	Participatory	Work		
			Health; Education		
			Plan Implementation		
Technical modification	✓	✓	Local Govt.	UNICEF	✓
				(Expertise)	(funds)
Incentives	Prizes at competitions		Local Govt.		
			Health		
			Water supply & drainags		
			(Awards & Subsidies)		
<u>B. Correction of Deficiencies</u>					
Technical	NGO's according to capabilities	Participatory	Local Govt.	✓	
Maintainence	✓	Participatory	Local Govt. (Water Resoruces)		
Quantity and Quality	NGC according to capabilities or call on another NGO.	Participatory	Local Govt and Health		

Section Three

A General Approach to Low Cost Technology Extension.

1. Innovation Development
2. Innovation Exchange and Dissemination
3. Training Strategies
4. Testing and Feedback on Extension Efforts

The Working Groups defined ways to better co-ordinate efforts of NGOs/Government and UN/Bilateral Assistance, for relevant technology extension:

1. Innovation Development: ^{Water} Research on appropriate technologies for storing water; the development of new technologies for purifying and handling water are priority areas. Developing means for effective maintenance and use of wells, rain water, Tanks, Rivers, and Canals were also felt vital areas for research.

2. Innovation Exchange and Dissemination: It was decided that information on technologies should be compiled centrally for exchange and dissemination. The Health Education Department was identified as an important channel for dissemination of technologies through NGOs to the community. Designs and handouts should be printed.

3. Training: Pilot training schemes for community innovators and NGO workers and volunteers can develop adapt and test technologies on the ground. (as per Section 2, Strategy 1) They should also help to insure opportunities for local employment through local technology production.

4. Testing and feedback on Extension Efforts: An assessment of the status of Government/NGO/Extension efforts should be the basis for planning new outreach activities.

Technologies extended and modified in light of NGO-community adaptation should be systematically reported and regularly applied to future Government/NGO efforts.